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AUTHOR Moser, Margo H.; Denham, Susanne A.
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ABSTRACT

A study of 37 middle-class families examined infant temperament in terms of stability over time, agreement between parents, and relations to mother-infant attachment. Results showed stability of activity level, orienting, and smiling from 6 weeks to 4 months of age, and a trend toward stability of soothability during this period. Stability was found for all measured temperament traits from 4 to 9 months. Orienting and soothability remained stable from 6 weeks to 9 months. Maternal and paternal perceptions of infant temperament were positively correlated for activity level, distress to limitations, distress to novel stimuli, and orienting. There was a trend toward significant positive correlations for infant smiling. Only in ratings of infant soothability were parents' assessments not related. When infants were grouped as easy or difficult, there were no significant effects of 6-week or 4-month temperament on 9-month maternal attachment to the infant. However, mothers felt significantly less attached to 9-month-olds rated as difficult and fearful. Mothers were less attached to first-borns above the median in distress to limitations and later-borns below the median. No significant relations were found between easy and difficult infant temperament measured at 6 weeks, 4 months, and 9 months and quality of infant attachment to the mother 1 year after delivery. (Author/RH)

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INFANT TEMPERAMENT: STABILITY, PARENTAL CONCURRENCE, AND RELATIONS TO MOTHER-INFANT ATTACHMENT

Margo H. Moser and Susanne A. Denham

George Mason University

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ABSTRACT

The purpose of this study was to examine infant temperament: its stability over time, agreement between parents, and relations to mother-infant attachment. Thirty-seven middle-class families participated in the study. Measures included the Rothbart (1978) Infant Behavior Questionnaire, Hauck's (1983) Measure of Postpartum Parental Attachment, and the Strange Situation (Ainsworth & Wittig, 1969). Results showed stability of activity level, orienting, and smiling from 6 weeks to 4 months and a trend toward stability of soothability during this period. Stability was found for all measured temperament traits from 4 months to 9 months. Orienting and soothability remained stabile from 6 weeks to 9 months. Maternal and paternal perceptions of infant temperament were positively correlated for activity level, distress to limitations, distress to novel stimuli, and orienting. There was a trend toward significant positive correlations for infant smiling. Only in their ratings of infant soothability were parents' assessments not related. When infants were grouped as easy or difficult based on a median split of composite maternal ratings of infant activity level, distress to limitations, and distress to novel stimuli, there were no significant effects of 6-week or 4-month temperament on 9-month maternal attachment to the infant. However, there were significant effects of 9-month easy and difficult infant temperament and infant distress to novel stimuli on 9-month maternal attachment; Mothers felt significantly less attached to nine-month-olds rated as difficult and fearful. There was also a significant interaction between infant distress to limitations and parity; Mothers were less attached to first-borns above the median in distress to limitations and later-borns below the median. No significant relations were found, however, between easy and difficult infant temperament measured at 6 weeks, 4 months, and 9 months and quality of infant attachment to the mother one year after delivery.

Infant Temperament: Stability, Parental Concurrence and Relations to Mother-Infant Attachment

PURPOSE

The purpose of this study was to examine infant temperament: its stability over time, agreement between parents, and relations to mother-infant attachment in 37 predominantly white, middle-class families.

METHODOLOGY

Measures

The Rothbart (1978) Infant Behavior Questionnaire was used to assess maternal perceptions of infant temperament (activity level, distress to limitations, distress to novel stimuli, orienting, smiling/laughter, and soothability) when infants were six weeks, four months, and nine months old. Fifteen fathers reported their perceptions of their infants' temperaments when the babies were nine months of age. Hauck's (1983) Measure of Postpartum Parental Attachment was used to assess maternal attachment to the infant six weeks and nine months after delivery. The Strange Situation (Ainsworth & Wittig, 1969) was utilized to assess the quality of infant attachment to the mother at twelve months of age.

Data Analysis

Pearson's Product Moment Correlations were utilized to assess stability of temperament and to compare mothers' and fathers' perceptions. To provide grouping variables for the analyses of variance and chi square analyses utilized in assessing the relations of infant temperament to maternal attachment to the infant and infant attachment to the mother, infants were grouped as easy or difficult based on a median split of composite maternal ratings of infant activity level, distress to limitations, and distress to novel stimuli. Both security/insecurity of attachment and standard infant attachment classifications (insecurely attached-avoidant, secure, and insecurely attached-resistant) were utilized in chi square analyses of the relations between infant temperament and infant attachment.

RESULTS

Stability of infant temperament

Results showed stability of activity level, orienting, and smiling and a trend toward stability of soothability from six weeks to four months. All measured infant temperament traits showed stablity from four months to nine months. From six weeks to nine months, orienting and soothability appeared stabile, and there was a trend toward stability of smiling. Findings are summarized in Table 1.

Concurrence of parental ratings of nine-month infant temperament

Maternal and paternal perceptions of nine-month infant temperament were positively correlated for activity level, distress to limitations, distress to novel stimuli, and orienting. There was a trend toward a positive correlation for infant smiling. Only in their ratings of infant soothability were parents' assessments not related. See Table 2.

Effects of infant temperament on maternal attachment to the child

When infants were grouped as easy or difficult, analyses of variance revealed no significant differences between mothers' nine-month attachment to infants rated as easy and difficult at six weeks and four months of age. However, mothers felt significantly less attached to infants rated as difficult at nine months on the composite measure of activity, distress to limitations, and distress to novel stimuli [$F(1,36) = 11.35$, $p = .002$]. A significant interaction between distress to limitations (anger) and birth order [$F(1,36) = 5.94$, $p = .02$] revealed that mothers felt less attached to first-born infants above the median in distress to limitations and later-born infants below the median. Mothers were also significantly less attached to nine-month-olds rated high in distress to novel stimuli [$F(1,36) = 6.98$, $p = .01$].

Relations of infant temperament to quality of infant attachment to the mother

Chi square analyses revealed no significant relations between easy and difficult infant temperament assessed by maternal report at six weeks, four months, and nine months and either the quality of infant attachment to the mother (secure/insecure) or infant attachment classification (insecurely attached-avoidant, securely attached, or insecurely attached-resistant).

TABLE 1 Pearson Product Moment Correlations Between Maternal Reports of Infant Temperament Traits at Six Weeks, Four Months, and Nine Months

Temperament Trait	6 weeks-4 months	6 weeks-9 months	4 months-9 months
Activity level	.37*	NS	.57***
Distress to limitations	NS	NS	.44**
Distress to novel stimuli	NS	NS	.44**
Orienting	.47**	.46**	.44**
Smiling	.42**	.27+	.60***
Soothability	.29+	.36*	.44**

*** = probability less than .001

** = probability less than .01

* = probability less than .05

+ = probability less than .10 (trend)

TABLE 2 Relations Between Maternal and Paternal Ratings of Nine-Month Infant Temperament

Temperament Trait	Correlations	Probability
Activity level	r = .62	p < .02*
Distress to limitations	r = .77	p = .001***
Distress to novel stimuli	r = .53	p < .05*
Orienting	r = .61	p < .02*
Smiling	r = .46	p < .09+
Soothability	r = .18	NS

*** = probability equal to or less than .001

** = probability equal to or less than .01

* = probability equal to or less than .05

+ = probability equal to or less than .10 (trend)

CONCLUSIONS

1. Stability

The stability of most measured temperament traits from six week to four months and all measured traits from four months to nine months supports the hypothesis that infant temperament traits are stable over short intervals and can be measured with some reliability using the Rothbart Infant Behavior Questionnaire (Rothbart, 1986). The stability of orienting and soothability from six weeks to nine months suggests that these temperament traits may be reliable early measures of innate individual differences. Lack of stability from six weeks to nine months for distress to limitations (anger) and distress to novel stimuli (fear) may reflect the development of emotions during the first nine months of life.

2. Parental Concurrence

Significant correlations found between mothers' and fathers' ratings of infant temperament traits in their nine-month-old infants are consistent with the findings of Huit and Ashton (1979) and Pederson, Anderson, and Cain (1976). Concurrence of parental ratings of infant temperament on the Rothbart IBQ enhance its validity as a measure of infant temperament.

3. Relations of Infant Temperament to Maternal Attachment to the Infant

Further longitudinal research is needed to determine the long term effects of infant temperament on maternal attachment to the child. Findings revealed that easy and difficult infant temperament (assessed as a composite of nine-month activity level, distress to limitations, and distress to novel stimuli) had a significant effect on maternal attachment to nine-month-old infants. Analyses of specific infant temperament traits revealed significant main effects of distress to novel stimuli (fear) and a significant interaction of distress to limitations (anger) with birth order. Additional research should examine whether infant fearfulness and anger continue to affect mothers' attachment to their babies into the second and third years of life or whether other temperament traits (or composites of traits) are correlated with maternal attachment as the child develops.

4. Relations of Infant Temperament to Infant Attachment to the Mother

Findings on relations between infant temperament and the quality of infant attachment to the mother are inconsistent. In this study, there were no significant relations between six week, four month, and nine month maternal ratings of infant temperament on the Rothbart IBQ and infant attachment classifications when infants were a year old. These results disagree with the findings of Belsky and Rovine (1987) and concur with those of Lefever & Barglow (1987). Because different measures of infant temperament were utilized in each of these studies, further research on the relations between infant temperament and the quality of infant attachment should be conducted, perhaps using multiple measures of temperament.

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